

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:  
JAE-HEE CHOI  
QUALCOMM INCORPORATED  
5775 MOREHOUSE DRIVE  
SAN DIEGO, CA 92121

**PCT**

WRITTEN OPINION

(PCT Rule 66)

Applicant's or agent's file reference 020453WO		Date of Mailing (day/month/year) <b>16 JUL 2004</b>
International application No. PCT/US03/36083		REPLY DUE within 2 months/days from the above date of mailing
International filing date (day/month/year) 07 November 2003 (07.11.2003)	Priority date (day/month/year) 08 November 2002 (08.11.2002)	
International Patent Classification (IPC) or both national classification and IPC IPC(7): H04Q 7/20 and US Cl.: 455/456.1, 456.3, 456.5, 456.6, 404.2, 11.1; 370/315		
Applicant QUALCOM INCORPORATED		

1. This written opinion is the first (first, etc.) drawn by this International Preliminary Examining Authority.
2. This opinion contains indications relating to the following items:
  - I ☒ Basis of the opinion
  - II ☐ Priority
  - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - IV ☐ Lack of unity of invention
  - V ☒ Reasoned statement under Rule 66.2 (a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - VI ☐ Certain documents cited
  - VII ☐ Certain defects in the international application
  - VIII ☐ Certain observations on the international application

3. The applicant is hereby invited to reply to this opinion.

**When?** See the time limit indicated above. ~~The applicant may, before the expiration of that time limit, request this Authority to grant an extension. See rule 66.2(d).~~

**How?** By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

**Also** For an additional opportunity to submit amendments, see Rule 66.4.  
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis.  
For an informal communication with the examiner, see Rule 66.6

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 08 March 2005 (08.03.2005)

Name and mailing address of the IPEA/US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer Jean A Gelin <i>f. Rena</i> Telephone No. (703) 305-4847
---	---

**I. Basis of the opinion****1. With regard to the elements of the international application:\***

- ☒ the international application as originally filed
- ☒ the description:  
 pages 1-15 \_\_\_\_\_, as originally filed  
 pages NONE \_\_\_\_\_, filed with the demand  
 pages NONE \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☒ the claims:  
 pages 16-23 \_\_\_\_\_, as originally filed  
 pages NONE \_\_\_\_\_, as amended (together with any statement) under Article 19  
 pages NONE \_\_\_\_\_, filed with the demand  
 pages NONE \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☒ the drawings:  
 pages 1-9 \_\_\_\_\_, as originally filed  
 pages NONE \_\_\_\_\_, filed with the demand  
 pages NONE \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
 pages NONE \_\_\_\_\_, as originally filed  
 pages NONE \_\_\_\_\_, filed with the demand  
 pages NONE \_\_\_\_\_, filed with the letter of \_\_\_\_\_

**2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.**  
 These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

**3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the written opinion was drawn on the basis of the sequence listing:**

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

**4. ☒ The amendments have resulted in the cancellation of:**

- ☒ the description, pages NONE \_\_\_\_\_
- ☒ the claims, Nos. NONE \_\_\_\_\_
- ☒ the drawings, sheets/fig NONE \_\_\_\_\_

**5. ☐ This opinion has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed."

**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. STATEMENT**

Novelty (N)

Claims NONE

YES

Claims 1-68

NO

Inventive Step (IS)

Claims NONE

YES

Claims 1-68

NO

Industrial Applicability (IA)

Claims 1-68

YES

Claims NONE

NO

**2. CITATIONS AND EXPLANATIONS***Please See Continuation Sheet*

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

**TIME LIMIT:**

The time limit set for response to a Written Opinion may not be extended. 37 CFR 1.484(d). Any response received after the expiration of the time limit set in the Written Opinion will not be considered in preparing the International Preliminary Examination Report.

**V. 2. Citations and Explanations:**

Claims 1-68 lack novelty under PCT Article 33(2) as being anticipated by SONY INTERNATIONAL (EP 1 207 404 A1).

Regarding claim 1, SONY teaches an apparatus comprising: a repeater including a receiver and a transmitter (col. 1, lines 7-23); and a position location device for determining a location of the repeater (col. 1, lines 7-36).

Regarding claim 2, SONY teaches wherein the position location device is integrated with the repeater (col. 1, lines 7-36).

Regarding claim 3, SONY teaches wherein the position location device is coupled to the repeater (col. 1, line 36 to col. 2, line 19).

Regarding claim 4, SONY teaches wherein the position location device is coupled to the repeater by an external connection (col. 1, line 36 to col. 2, line 19).

Regarding claim 5, SONY teaches wherein the position location device is a GPS receiver (col. 1, lines 15-25).

Regarding claim 6, SONY teaches wherein the position location device is a mobile station (col. 1, lines 27-37).

Regarding claim 7, SONY teaches wherein the position location device determines the location of the repeater based on radio-location signals received by the receiver (col. 2, lines 27-35).

Regarding claim 8, SONY teaches wherein the position location device determines the location of the repeater based on radio-location signals received by the position location device (col. 2, lines 27-35).

Regarding claim 9, SONY teaches wherein the location of the repeater is used to update a base station almanac (col. 6, lines 19-45).

Regarding claim 10, SONY teaches wherein the transmitter transmits the location of the repeater (col. 4, lines 20-53).

Regarding claim 11, SONY teaches wherein the transmitter transmits the location of the repeater to an external device to update a base station almanac (col. 6, lines 19-45).

Regarding claims 12-16, SONY teaches wherein the external device is a base station, wherein the external device is connected to a base station, wherein the base station receives the location of the repeater from the repeater, wherein the base station updates a base station almanac with the location of the repeater (col. 1, line 7 to col. 2, line 35, col. 6, lines 6-45).

Regarding claim 17, SONY teaches wherein the receiver and the transmitter are also used to repeat signals (col. 7, lines 1-17).

Regarding claims 18, 22, 28, SONY teaches repeater comprising: a receiver including a position location device, wherein the position location device determines a location of the repeater based on radio-location signals received by the receiver; and a transmitter for transmitting the location of the repeater (col. 6, line 6 to col. 7, line 17).

Regarding claims 19, 23, SONY teaches wherein the receiver and the transmitter are also used to repeat signals (col. 7, lines 1-17).

Regarding claims 20, 24, SONY teaches wherein the transmitter transmits the location of the repeater to an external device

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

to update a base station almanac (col. 6, line 19 to col. 7, line 26).

Regarding claims 20, 25, SONY teaches wherein the external device is a base station (col. 1, lines 7-36).

Regarding claim 26, SONY teaches wherein the external device is a base station controller (col. 5, lines 25-55).

Regarding claim 27, SONY teaches wherein the transmitter transmits the location of the repeater to an external device for storage (col. 6, line 19 to col. 7, line 25).

Regarding claims 29, 61, SONY teaches repeater comprising: a receiver for receiving signals (col. 1, lines 7-23); a position location device for determining a location of the repeater based on radio-location signals received by the position location device (col. 1, line 36 to col. 2, line 19); and at least one memory device for storing the location of the repeater (col. 2, lines 27-35); a processor configured to retrieve the location of the repeater from the at least one memory device (col. 4, lines 20-53); and a transmitter for transmitting the received signals and the location of the repeater retrieved by the processor (col. 5, line 8 to col. 6, line 45).

Regarding claims 30, 31, SONY teaches wherein the location of the repeater is manually entered into the repeater, wherein the location of the repeater is entered into the repeater via another device (col. 4, lines 18 to col. 5, line 53).

Regarding claims 32, 62, SONY teaches wherein the processor retrieves the location of the repeater from the at least one memory device in response to a query (col. 5, lines 1-53).

Regarding claim 33, SONY teaches wherein the receiver and the transmitter are used to repeat signals (col. 7, lines 1-19).

Regarding claim 34, SONY teaches system comprising: a repeater including a position location device for determining a location of the repeater and a transmitter for transmitting the location of the repeater (col. 4, lines 17-50); and a base station for receiving the location of the repeater (col. 4, line 17 to col. 5, line 31).

Regarding claims 35, 67, 68, SONY teaches wherein the base station updates a base station almanac with the location of the repeater (col. 1, lines 7-36).

Regarding claim 36, SONY teaches wherein the base station routes the location of the repeater to another device (col. 1, line 7 to col. 2, line 53).

Regarding claim 37, SONY teaches wherein the base station queries the repeater for the location of the repeater (col. 1, lines 7-36).

Regarding claim 38, SONY teaches method for determining a location of a repeater comprising the steps of: receiving radio-location signals within the repeater (col. 1, lines 7-23); and determining the location of the repeater based on the radio-location signals received within the repeater (col. 1, line 7 to col. 2, line 35).

Regarding claim 39, SONY teaches wherein the receiving and determining steps are performed by the repeater (col. 7, lines 1-36).

Regarding claim 40, SONY teaches wherein the radio-location signals include assistance data (col. 6, lines 19-50).

Regarding claim 41, SONY teaches the step of transmitting the location of the repeater (col. 7, lines 1-53).

Regarding claim 42, SONY teaches wherein the location of the repeater is transmitted by the repeater (col. 1, lines 7-36).

Regarding claim 43, SONY teaches wherein the location of the repeater is transmitted by the repeater in response to a query (col. 7, lines 7-36).

Regarding claims 44, 63, SONY teaches wherein the location of the repeater is transmitted by the repeater during a predetermined time interval (col. 4, lines 19-57).

Regarding claims 45, 64, SONY teaches wherein the location of the repeater is transmitted by the repeater during initial initialization (col. 6, line 6 to col. 7, line 17).

Regarding claims 46, 65, SONY teaches wherein the location of the repeater is transmitted by the repeater on an automated basis (col. 1, line 7 to col. 2, line 19).

Regarding claim 47, SONY teaches wherein the location of the repeater is transmitted to a base station (col. 7, line 1-17).

Regarding claims 48, 66, SONY teaches the step of updating a base station almanac with the location of the repeater (col. 6, lines 19-46).

Regarding claim 49, SONY teaches method for determining a location of a repeater comprising the steps of: receiving radio-location signals; determining the location of the repeater based on the radio-location signals; transmitting the location of the repeater (col. 1, lines 7-36); and updating a base station almanac with the location of the repeater (col. 6, line 19 to col. 7, line 17).

Regarding claim 50, SONY teaches method for updating a location of a repeater comprising the steps of: receiving a query for the location of the repeater; determining the location of the repeater; and transmitting the location of the repeater (col. 2, lines 7-36, col. 6, line 19 to col. 7, line 19).

Regarding claim 51, SONY teaches wherein the query is sent by a base station (col. 4, lines 20-53).

Regarding claim 52, SONY teaches wherein the location of the repeater is manually entered into the repeater (col. 3, lines 4-57).

Regarding claim 53, SONY teaches wherein the determining and transmitting steps are performed by the repeater (col. 3, lines 4-56).

Regarding claim 54, SONY teaches further comprising the step of updating a base station almanac with the location of the repeater (col. 6, lines 19-53).

Regarding claims 55, SONY teaches method for querying the location of a repeater comprising the steps of: sending a query for the location of the repeater; and receiving the location from the repeater (col. 1, lines 7-36, col. 6, line 7 to col. 7, line 17).

Regarding claims 56, 57, SONY teaches wherein the query is sent by a base station (col. 4, lines 20-53).

Regarding claims 58, 59, SONY teaches the query is based on a predetermined time interval (col. 4, lines 19-57).

Regarding claim 60, SONY teaches the query is based on the deployment of a new repeater (col. 7, lines 1-17).

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

----- NEW CITATIONS -----

NONE